

WHAT IS CLAIMED IS:

1. An isolated nucleic acid molecule that comprises a nucleotide sequence having at least about 80% sequence identity to (a) a nucleotide sequence encoding a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide comprising the sequence of amino acid residues from about 1 to about 577 of SEQ ID NO:2, about 1 to about 474 of SEQ ID NO: 4, about 1 to about 506 of SEQ ID NO: 18, about 1 to about 344 of SEQ ID NO: 16, or about 1 to about 633 of SEQ ID NO: 14, respectively, or (b) the complement of the nucleotide sequence of (a).

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8. The isolated nucleic acid molecule of Claim 7 comprising the full-length polypeptide coding sequence of the human protein cDNA deposited with the ATCC on September 28, 1999, under ATCC Deposit No. PTA-799, on September 28, 1999, under ATCC Deposit No. PTA-798, (DNA-C-MG.2-1776 and DNA-C-MG.12-1776, respectively).

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9. An isolated nucleic acid molecule encoding a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide comprising nucleic acid that hybridizes to the complement of the nucleic acid sequence that encodes amino acids about 1 to about 577 of SEQ ID NO:2, about 1 to about 474 of SEQ ID NO: 4, about 1 to about 506 of SEQ ID NO: 18, about 1 to about 344 of SEQ ID NO: 16, or about 1 to about 633 of SEQ ID NO: 14, respectively.

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10. The isolated nucleic acid molecule of Claim 9, wherein the nucleic acid that encodes amino acids about 1 to about 577 of SEQ ID NO:2, about 1 to about 474 of SEQ ID NO: 4, about 1 to about 506 of SEQ ID NO: 18, about 1 to about 344 of SEQ ID NO: 16, or about 1 to about 633 of SEQ ID NO: 14, respectively, comprises nucleotides about 66 to about 1796 of SEQ ID NO:1, about 465 to about 1886 of SEQ ID NO:3, about 271 to about 1788 of SEQ ID NO:17, about 267 to about 1298 of SEQ ID NO:15, or about 71 to about 2059 of SEQ ID NO:13, respectively.

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11. The isolated nucleic acid molecule of Claim 9, wherein the hybridization occurs under stringent hybridization or wash conditions.

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12. An isolated nucleic acid molecule comprising (a) a nucleic acid sequence encoding a polypeptide scoring at least 80% positives when compared to the amino acid sequence from about 1 to about 577 of SEQ ID NO:2, about 1 to about 474 of SEQ ID NO: 4, about 1 to about 506 of SEQ ID NO: 18, about 1 to about 344 of SEQ ID NO: 16, or about 1 to about 633 of SEQ ID NO: 14, respectively, or (b) the complement of the DNA of (a).

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13. An isolated nucleic acid molecule comprising at least about 596 or 1535 nucleotides, for PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 respectively, and which is produced by hybridizing a test DNA molecule under stringent hybridization conditions with (a) a DNA molecule which encodes a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide comprising a sequence of amino acid residues from about 1 to about 577 of SEQ ID NO:2, about 1 to about 474 of SEQ ID NO: 4, about 1 to about 506 of SEQ ID NO: 18, about 1 to about 344 of SEQ ID NO: 16, or about 1 to about 633 of SEQ ID NO: 14, respectively, or (b) the complement of the DNA molecule of (a), and isolating the test DNA molecule.

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14. The isolated nucleic acid molecule of Claim 13, which has at least about 80% sequence identity to (a) or (b).

15. A vector comprising the nucleic acid molecule of Claim 1.

16. The vector of Claim 15, wherein the nucleic acid molecule is operably linked to control sequences recognized by a host cell transformed with the vector.

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17. A nucleic acid molecule deposited with the ATCC on September 28, 1999, under ATCC Deposit No. PTA-799, on September 28, 1999, under ATCC Deposit No. PTA-798, (DNA-C-MG.2-1776 and DNA-C-MG.12-1776, respectively).

10 18. A host cell comprising the vector of Claim 15.

19. The host cell of Claim 18, wherein the cell is a CHO cell.

20. The host cell of Claim 18, wherein the cell is an *E. coli*.

15 21. The host cell of Claim 18, wherein the cell is a yeast cell.

22. A process for producing a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide comprising culturing the host cell of Claim 18 under conditions suitable for expression of the PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, wherein the PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide is produced.

23. The process of claim 22, further comprising the step of recovering the PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide from the cell culture.

24. An isolated PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide comprising an amino acid sequence comprising at least about 80% sequence identity to the sequence of amino acid residues from about 1 to about 577 of SEQ ID NO:2, about 1 to about 474 of SEQ ID NO: 4, about 1 to about 506 of SEQ ID NO: 18, about 1 to about 344 of SEQ ID NO: 16, or about 1 to about 633 of SEQ ID NO: 14, respectively.

25. The isolated PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide of Claim 24 comprising amino acid residues about 1 to about 577 of SEQ ID NO:2, about 1 to about 474 of SEQ ID NO: 4, about 1 to about 506 of SEQ ID NO: 18, about 1 to about 344 of SEQ ID NO: 16, or about 1 to about 633 of SEQ ID NO: 14, respectively.

26. An isolated PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72

polypeptide having at least about 80% sequence identity to the polypeptide encoded by the cDNA insert of the vector deposited with the ATCC on September 28, 1999, under ATCC Deposit No. PTA-799, on September 28, 1999, under ATCC Deposit No. PTA-798, (DNA-C-MG.2-1776 and DNA-C-MG.12-1776, respectively).

5 27. The isolated PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide of Claim 26 which is encoded by the cDNA insert of the vector deposited with the ATCC on September 28, 1999, under ATCC Deposit No. PTA-799, on September 28, 1999, under ATCC Deposit No. PTA-798, (DNA-C-MG.2-1776 and DNA-C-MG.12-1776, respectively).

10 28. An isolated PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide scoring at least 80% positives when compared to the sequence of amino acid residues from about 1 to about 577 of SEQ ID NO:2, about 1 to about 474 of SEQ ID NO: 4, about 1 to about 506 of SEQ ID NO: 18, about 1 to about 344 of SEQ ID NO: 16, or about 1 to about 633 of SEQ ID NO: 14, respectively.

15 29. An isolated PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide comprising the sequence of amino acid residues from about 1 to about 577 of SEQ ID NO:2, about 1 to about 474 of SEQ ID NO: 4, about 1 to about 506 of SEQ ID NO: 18, about 1 to about 344 of SEQ ID NO: 16, or about 1 to about 633 of SEQ ID NO: 14, respectively, or a fragment thereof sufficient to provide a binding site for an anti-PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 antibody.

25 30. An isolated polypeptide produced by (i) hybridizing a test DNA molecule under stringent conditions with (a) a DNA molecule encoding a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide comprising the sequence of amino acid residues from about 1 to about 577 of SEQ ID NO:2, about 1 to about 474 of SEQ ID NO: 4, about 1 to about 506 of SEQ ID NO: 18, about 1 to about 344 of SEQ ID NO: 16, or about 1 to about 633 of SEQ ID NO: 14, respectively, or (b) the complement 30 of the DNA molecule of (a), (ii) culturing a host cell comprising the test DNA molecule under conditions suitable for the expression of the polypeptide, and (iii) recovering the polypeptide from the cell culture.

35 31. The isolated polypeptide of Claim 30, wherein the test DNA has at least about 80% sequence identity to (a) or (b).

32. A chimeric molecule comprising a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide fused to a heterologous amino acid sequence.

33. The chimeric molecule of Claim 32, wherein the heterologous amino acid sequence is an epitope tag sequence.

34. The chimeric molecule of claim 32, wherein the heterologous amino acid sequence is a secretion signal peptide.

35. The chimeric molecule of Claim 32, wherein the heterologous amino acid sequence is a Fc 5 region of an immunoglobulin.

36. An antibody which specifically binds to a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide.

10 37. The antibody of Claim 36, wherein the antibody is a monoclonal antibody.

38. The antibody of Claim 36, wherein the antibody is a humanized antibody.

39. The antibody of Claim 36, wherein the antibody is an antibody fragment.

15 40. An antigen compound targeted to a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 gene sequence, wherein said antigen compound inhibits the expression of PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72.

20 41. The antigen compound of claim 40, which is an antisense oligonucleotide comprising 5 to 60 nucleobases.

42. The antigen compound of claim 41 wherein the antisense oligonucleotide comprises at least one modified internucleoside linkage.

25 43. The antigen compound of claim 41 wherein the modified internucleoside linkage is a phosphorothioate linkage.

30 44. The antigen compound of claim 41 wherein the antisense oligonucleotide comprises at least one modified sugar moiety.

45. The antigen compound of claim 44 wherein the modified sugar moiety is a 2'-O-methoxyethyl sugar moiety.

35 46. The antigen compound of claim 41 wherein the antisense oligonucleotide comprises at least one modified nucleobase.

47. The antigen compound of claim 46 wherein the modified nucleobase is a 5-methylcytosine.

48. The antigenic compound of claim 41 wherein the antisense oligonucleotide is a chimeric oligonucleotide.

49. The antigenic compound of claim 41 that is a peptide nucleic acid or a ribozyme.

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50. The antigenic compound of claim 40, wherein the 5 to 60 nucleobases comprises a sequence from SEQ ID NO. 1.

10 51. A vector comprising a DNA which encodes the antigenic oligonucleotide of claim 40.

52. A host cell comprising the vector of claim 51.

15 53. A method of inhibiting the expression of PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 in human cells or tissues in vitro comprising contacting the cells or tissues with the antigenic compound of claim 40 so that expression of PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 is inhibited.

20 54. A pharmaceutical preparation for treating a condition related to PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 expression by a cell, comprising a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 antigen which enters the PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72-expressing cell and binds specifically to a nucleic acid molecule encoding PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72, said antigen being present in a biologically acceptable carrier.

25 55. The pharmaceutical preparation according to claim 54, which further comprises at least one agent for improving delivery of said antigen to the PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72-expressing cell.

30 56. The pharmaceutical preparation according to claim 55, wherein the at least one agent comprises a lipid.

57. The pharmaceutical preparation according to claim 55, which further comprises at least one targeting agent for improving cell-type specific delivery of the PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 antigen.

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58. An agonist to a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide.

59. An antagonist to a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide.

60. A composition comprising (a) a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, (b) an agonist to a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, (c) an antagonist to a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, or (d) an anti-PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 antibody in admixture with a pharmaceutically acceptable carrier.

10 61. The composition of Claim 60 comprising a therapeutically effective amount of (a) a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, (b) an agonist of a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, or (c) an antagonist of a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, thereof.

15 62. The composition of Claim 60, further comprising a cardiovascular, endothelial, angiogenic, or angiostatic agent.

63. The composition of Claim 62, wherein the polypeptide or antibody and the cardiovascular, endothelial, angiogenic or angiostatic agent are present in therapeutically effective amounts.

20 64. The composition of Claim 60, wherein the agonist is a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72-encoding nucleic acid.

25 65. The composition of Claim 60, wherein the antagonist is an PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 antisense molecule or antibody.

66. The composition of Claim 60 further comprising a cardiovascular, endothelial, angiogenic or angiostatic agent.

30 67. A method of preparing the composition of Claim 60 comprising admixing (a) a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, (b) an agonist of a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, or (c) an antagonist of a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, with a pharmaceutically acceptable carrier.

35 68. An article of manufacture comprising:
(a) a composition comprising (i) a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, (ii) an agonist of a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45,

PRO-C-MG.64 or PRO-C-MG.72 polypeptide, or (iii) an antagonist of a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, in admixture with a pharmaceutically acceptable carrier;

(b) a container containing the composition; and

5 (c) a label affixed to said container, or a package insert included in said pharmaceutical product referring to the use of (a) the treatment of an angiogenic disorder.

69. The article of manufacture of Claim 68, wherein the agonist is an anti-PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 antibody or antigenic compound.

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70. The article of manufacture of Claim 68, wherein said antagonist is an anti-PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 antibody or antigenic compound.

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71. The article of manufacture of Claim 68, wherein the composition comprises a therapeutically effective amount of said (a) PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, (b) agonist of a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide or (c) antagonist of a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, in admixture with said pharmaceutically acceptable carrier.

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72. A method for identifying an agonist of a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide comprising:

(a) contacting cells and a test compound to be screened under conditions suitable for the induction of a cellular response normally enhanced by a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide; and

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(b) determining the induction of said cellular response to determine if the test compound is an effective agonist, wherein the induction of said cellular response is indicative of said test compound being an effective agonist.

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73. The method of Claim 72, wherein the cellular response normally induced by said PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide is stimulation of tube formation.

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74. A method for identifying a compound that inhibits an activity of a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide comprising contacting a test compound with a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide under conditions and for a time sufficient to allow the test compound and polypeptide to interact and determining whether the activity of said PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide is inhibited.

75. A method for identifying a compound that inhibits the expression of a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide or gene in cells that normally expresses the polypeptide, wherein the method comprises contacting the cells with a test compound under conditions suitable for allowing expression of said PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide and determining whether the expression of the PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide or gene is inhibited.

5 76. The method of claim 75 wherein the compound is an antigene compound.

10 77. The method of Claim 76, wherein said antigene compound is an antisense oligonucleotide.

78. A method for diagnosing a disease or susceptibility to a disease which is related to a mutation in a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide-encoding nucleic acid sequence comprising:

15 (a) isolating a nucleic acid sequence encoding a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide from a sample derived from a host; and

(b) determining the presence or absence of said mutation in the PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide nucleic acid sequence, wherein the presence or absence of said mutation is indicative of the presence of said disease or susceptibility to said disease.

20 79. A method of diagnosing a cardiovascular, endothelial or angiogenic disorder in a mammal which comprises analyzing the level of expression of a gene encoding a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide (a) in a test sample of tissue cells obtained from said mammal, and (b) in a control sample of known normal tissue cells of the same cell type, wherein a higher or 25 lower expression level in the test sample as compared to the control sample is indicative of the presence of a cardiovascular, endothelial or angiogenic disorder in said mammal.

80. A method of diagnosing a cardiovascular, endothelial or angiogenic disorder in a mammal which comprises detecting the presence or absence of a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide in a test sample of tissue cells obtained from said mammal, wherein the presence or absence of said PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide in said test sample is indicative of the presence of a cardiovascular, endothelial or angiogenic disorder in said mammal.

35 81. A method of diagnosing a cardiovascular, endothelial or angiogenic disorder in a mammal comprising (a) contacting an anti-PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 antibody with a test sample of tissue cells obtained from the mammal, and (b) detecting the formation of a complex between the anti-PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72

antibody and a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide in the test sample, wherein the formation of said complex is indicative of the presence of a cardiovascular, endothelial or angiogenic disorder in the mammal.

5 82. A method for determining the presence of a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide in a sample comprising contacting a sample suspected of containing a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide with an anti-PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 antibody and determining binding of said antibody to a component of said sample.

10 83. A cardiovascular, endothelial or angiogenic disorder diagnostic kit comprising an anti-PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 antibody or antigen and a carrier.

15 84. The kit of Claim 83 further comprising instructions for using said antibody to detect the presence of the PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide or antigen.

20 85. A method for treating a cardiovascular, endothelial or angiogenic disorder in a mammal comprising administering to the mammal a therapeutically effective amount of (a) a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, (b) an agonist of a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, or (c) an antagonist of a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide.

25 86. The method of Claim 85, wherein the disorder is vascular trauma or cancer.

87. The method of Claim 85, wherein the amount of (a), (b) or (c) is administered together with a cardiovascular, endothelial, angiogenic, or angiostatic agent.

30 88. The method of Claim 85, wherein the amount of (a), (b) or (c) is administered in combination with a chemotherapeutic agent, a growth inhibitory agent, a cytotoxic agent, or an angiostatic agent.

89. The method of Claim 85 wherein said agonist is an anti-PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 antibody or antigen.

35 90. The method of Claim 85 wherein said antagonist is an anti-PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 antibody or antigen.

91. A method for treating a cardiovascular, endothelial or angiogenic disorder in a mammal

comprising administering to the mammal a nucleic acid molecule that encodes (a) a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, (b) an agonist of a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, or (c) an antagonist of a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide.

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92. The method of Claim 91 wherein said agonist is an anti-PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 antibody or antigen.

10 93. The method of Claim 91 wherein said antagonist is an anti-PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 antibody or antigen.

94. The method of Claim 91, wherein the nucleic acid molecule is administered via *ex vivo* gene therapy.

15 95. The method of Claim 91, wherein the cardiovascular, endothelial or angiogenic disorder is vascular trauma or a cancer.

96. A recombinant retroviral particle comprising a retroviral vector consisting essentially of a promoter, nucleic acid encoding (a) a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, (b) an agonist polypeptide of a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, or (c) an antagonist polypeptide of a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, and a signal sequence for cellular secretion of the polypeptide, wherein the retroviral vector is in association with retroviral structural proteins.

25 97. An *ex vivo* producer cell comprising a nucleic acid construct that expresses retroviral structural proteins and also comprises a retroviral vector consisting essentially of a promoter, nucleic acid encoding (a) a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, (b) an agonist polypeptide of a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, or (c) an antagonist polypeptide of a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, and a signal sequence for cellular secretion of the polypeptide, wherein said producer cell packages the retroviral vector in association with the structural proteins to produce recombinant retroviral particles.

35 98. A method for inhibiting endothelial cell growth in a mammal comprising administering to the mammal an effective amount of (a) a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, (b) an agonist of a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, (c) an antagonist of a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, or (d) an anti-PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-

MG.64 or PRO-C-MG.72 antibody, wherein endothelial cell growth in said mammal is inhibited.

99. A method for stimulating endothelial cell growth in a mammal comprising administering to the mammal an effective amount of (a) a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, (b) an agonist of a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, (c) an antagonist of a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, or (d) an anti-PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 antibody, wherein endothelial cell growth in said mammal is stimulated.

100. A method for inhibiting angiogenesis comprising administering an effective amount of an (a) a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, (b) an agonist of a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, or (c) an antagonist of a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, to the mammal, wherein said angiogenesis is inhibited.

101. A method for stimulating angiogenesis comprising administering to a mammal an effective amount of (a) a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, (b) an agonist of a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, or (c) an antagonist of a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, wherein angiogenesis is stimulated.

102. A method for inhibiting endothelial tube formation comprising administering an tube-formation-inducing effective amount of (a) a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, (b) an agonist of a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, or (c) an antagonist of a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide to the mammal, wherein said tube formation is inhibited.

103. A method for stimulating endothelial tube formation comprising administering to a mammal an tube-formation-inducing effective amount (a) a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, (b) an agonist of a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, or (c) an antagonist of a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, wherein tube formation is stimulated.

104. A method for treating a tumor, reducing the size of a tumor, reducing the vasculature supporting a tumor, or reducing the tumor burden of a mammal, comprising administering to a mammal in need thereof a therapeutically effective amount of (a) a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, (b) an agonist of a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, or (c) an antagonist of a PRO-C-MG.2, PRO-C-MG.12, PRO-C-

MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide.

105. A method for treating a disease or disorder characterized by undesirable excessive neovascularization, comprising administering to a mammal in need thereof a therapeutically effective amount of
5 (a) a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, (b) an agonist of a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide, or
(c) an antagonist of a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 polypeptide.

10 106. The method of claim 105, wherein the disease or disorder is selected from the group consisting of rheumatoid arthritis, psoriasis, atherosclerosis, retinopathy, retrolental fibroplasia, neovascular glaucoma, age-related macular degeneration, thyroid hyperplasias, Grave's disease, tissue transplantation, chronic inflammation, lung inflammation, and obesity

15 107. A microarray, the microarray comprising a solid support and a plurality of different oligonucleotides attached to the support, wherein each of the different oligonucleotides is attached to the surface of the solid support in a different predefined region, has a different determinable sequence, and is at least 6 nucleotides in length, wherein at least one of the different oligonucleotides is a PRO-C-MG.2, PRO-C-MG.12, PRO-C-MG.45, PRO-C-MG.64 or PRO-C-MG.72 sequence.

20 108. The array of claim 107, wherein each different oligonucleotides is from about 5 to about 60 nucleotides in length.

25 109. The array of claim 107, wherein the array comprises 2 to 1,000,000 different oligonucleotides attached to the solid support.

110. The array of claim 107, wherein the solid support is glass.

111. The array of claim 107, wherein the oligonucleotides are attached to the surface of the solid support through a linker group.

112. The array of claim 107, wherein the oligonucleotides are at least 20% pure.